

Pest Update (September 2, 2009)

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Available on the net at:

<http://www.state.sd.us/doa/Forestry/educational-information/Pest-Alert-Archives.htm>.

Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement or the exclusion a criticism regarding effectiveness. Please read and follow all label instructions and the label is the final authority for a product's use on a particular pest or plant. Products requiring a commercial pesticide license are occasionally mentioned if there are limited options available. These products will be identified as such but it is the reader's responsibility to determine if they can legally apply any product identified in this publication.

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E-samples



Downy mildew is beginning to show up in several cities within the state. The most common one has been downy mildew on viburnums (*Plasmopara viburni*). The symptoms begin as white to yellowish spots on the upper leaf surface. Eventually these spots may drop out leaving holes in the leaves. The disease will also cause blotches to occur on the leaves and usually the underside of the leaves will

white to grayish mats. The downy mildews are caused by oomycetes and are not controlled by all the same products that can be used to manage powdery mildew since the organisms that cause downy mildew are not usually classified as fungi. The best control for the disease is prevention, thinning the plants so that there is enough air circulation to permit the leaves to dry out quickly after a rain. Some fungicides are effective against these organisms with copper fungicides being the ones most commonly available to homeowners. These need to be applied as soon as the leaves open and then continued on a 10 day basis until the weather begins to dry; for this year that would have required regular applications up until early August!



Aphids populations are building on many plants that this time of year including maples and elms. I have seen some maples that are already beginning to color and experience leaf drop but this is not an indicator of the approaching winter but a high aphid population. These infested trees will be easy to spot by the colonies of aphids on the undersides of the leaves and the amount of “sticky” leaves and any objects beneath the tree.

This is due to the honeydew excreted by the aphids as they feed in the tree. Control now would be a little too late but when the infestation is first noticed the tree can be sprayed with an insecticide containing acephate or if a large population is anticipated then a soil drench of an insecticide containing imidacloprid can be applied in early summer.



Another problem that seems to be showing up in the eastern half of the state is the pine tortoise scale. This small sessile insect lives by sucking the sap from the shoots of pines, most commonly Austrian, mugo and Scotch pine. Heavily infested trees can be readily identified by the discolored needles and dying branches. The needles and shoots may also be covered with a

black sooty mold. This is a fungus that lives on the honeydew excreted by these small insects as they feed. The adult scales are reddish brown, helmet shaped and about 1/8- to 1/4-inch in diameter. The control is a spray of an insecticide containing acephate in late June to kill the nymal stage, the crawlers, as they hatch or a soil drench of an insecticide containing imidacloprid in early spring.



The annual drop of the older needles is beginning to occur throughout the state.

Every year, pines shed their third year needles as autumn approaches. If the weather is rainy and cloudy during September this event can pass without notice. However, if the weather becomes dry and sunny, the older needles can turn almost a golden yellow before falling. This color change, and the amount of needles that are

shed, is often seen with alarm by some tree owners but it is just a natural process. The best way to tell if the discolored and falling needles are just normal fall needle drop look to see which needles are being shed. If it is the interior needles, this is the normal needle drop. If it is only the needles at the very tip of the twigs and branches, than this is most likely the result of a fungal disease such as diploia tip blight or insects.

Samples received

Brown County (extension)

What is causing the leaves to scorch on this maple? It was standing in water most of the year.

The waterlogged soils resulted in a decline of the root system, reducing its capability to absorb water. The increase water stress, particularly now that warmer, drier weather is occurring, resulted in the scorched foliage. Simply put the tree was dying from the lack of water since it was standing in water; roots must be living to absorb water and living root require oxygen.

Brown County (city)

What is causing these blotches on the linden leaves?

We often see discoloration on linden leaves at this time of year. Usually it turns out to be sooty mold, a fungus living on the honeydew excreted by aphids as they feed. However, this turned out to be linden leaf blotch, a disease caused by the fungus *Didymosphaeria petrakiana*. The blotches develop in late summer with the upper leaf surface forming dark brown to black lesions. Infected leaves can also begin to fall prematurely and it is common to see tree completely defoliated by mid-September. There are no fungicides available for control but fortunately it rarely harms the tree, just the appearance.

Butte County (extension)

What is wrong with Richard's hackberry tree? The leaves are yellowing and curling.

The yellowing and curling are due to the hackberry blister gall and some of the twig dieback due to the hackberry bud gall. There are two minor insects that are related to the psyllid that caused the hackberry nipple gall so common to our region. I suspect the real reason for the decline is more root or soil related and I can go no further with a twig sample. If anything, I would bet the tree needs to be watered more.

Clark County (extension)

What came out of the cocoon we pulled out of a mountainash? Also the branches have scaly white material on them and they are full of holes.

The adult insect in the bag was a braconid. The larvae of these insects are parasites on the larvae of Lepidoptera and Coleoptera. There are several borers that attack mountainash and it appears this insect was parasitizing them. The oval holes on the trunk were not borer holes but those caused by sapsuckers, a bird. The scaly white material was the fruiting structure of a sapwood rot fungus (*Schizophyllum* spp). The tree was probably just declining of old age, which for mountainash can be 20 years, and the dying tree was colonized by borers and rot fungi.

Codington County (division)

I am seeing some mite activity and SNED on this spruce but neither should be enough to cause the yellowing on this spruce.

You are right regarding mites and SNED. However SNED is associated with declining trees and looking at the abrupt change in needle lengths it appears that this tree was stressed about three years ago. The four year old needles are normal length; the needles formed since then are severely stunted. The question is what caused the stress? Did the owner remember anything happening near the tree back then? Construction, perhaps or other soil disturbance?

Davison County (extension)

Are Austrees very susceptible to herbicide? They suspect herbicide injury on these trees but do you see anything else?

No, there were no signs or symptoms of any of the common stressors of willows and the symptoms observed are what I would expect to see with drift. The lab tests I think will bear this out. Willows are susceptible to herbicide drift from many of the more common chemicals applied.

Dewey County (extension)

The edge of the leaves on these elms are turning black and the remainder of the leaf brown.

This is a Siberian elm (*Ulmus pumila*) and these trees are prone to a number of canker diseases that can cause the foliage to discolor and fall prematurely. The cankers are usually further down the stem, sometimes hidden beneath the bark, though often time's wounds are visible to the surface. This is

the most likely cause for the symptoms and if it is a canker there is no effective control.

Gregory County (conservation district) **What is wrong with this ash tree. The leaves are turning brown.**

This is only ash anthracnose, a common, but rarely serious, disease of ash. I have seen a lot more of this disease in 2009 due to the wet spring weather. The tree should leaf out just fine next spring.

Hanson County (extension) **These maple leaves are covered with small white insects and the leaves are falling.**

The insect were aphids. Please see the E-sample section above for more information on aphids.

Jackson County (conservation district) **What is wrong with this bur oak? It was planted this year and appears okay except for the smaller than normal leaves.**

The leaves do show some of the blister galls that are formed by a cynipid wasp. However, I suspect the reason for the smaller than normal leaves is related to transplant shock, either the tree was not water sufficiently after transplanting or the tree was planted bare-root and it was not sweated, hence leaf out was slow and uneven. Since the leaves were small, the tree has not been able to produce the amount of food it may need and there is the possibility that it will not survive the winter. I suggest watering this fall and just wait to see how it does next spring.

Walworth County (extension) **Does this tree have Dutch elm disease?**

I can say the sample submitted does *not* have Dutch elm disease. Sometimes the disease is not complete through the tree so a sample can miss it. However, I was able to find a lot of aphids in the leaves attached to the branch submitted for testing. The wilting and yellowing you see in the tree might just be aphids. See under E-samples for more information on aphids.

Walworth County (extension) **Do these trees by the Courthouse have Dutch elm disease?**

Again, I can only test what is in the sample and sometimes the samples do not contain the disease but the tree does. It is important to always take samples from branches (about pencil size diameter) that have wilting leaves. Three of the four samples did not contain Dutch elm disease, the one that was positive was the sample marked "Sidewalk Center of Court Yard."

Yankton County (extension) **Is this a Bing cherry and what is this tree with the dark leaves coming up near the fence?**

Sorry to say the sample was not a Bing cherry, not even a cherry, it's a crabapple. The tree near the fence is a Schubert chokecherry.